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EXAMINER

NOGUEROLA, ALEXANDER STEPHAN

ART UNIT PAPER NUMBER

1753

DATE MAILED: 03/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

4

Office Action Summary	Application No. 10/821,328	Applicant(s) GUZMAN, NORBERTO A.	
	Examiner ALEX NOGUEROLA	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-28 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-28 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 June 2002 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. US 6,406,604 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of U.S. Patent No. US 6,406,604 B1 meets all the limitations required by claim 1 of the instant application.

Art Unit: 1753

3. Claim 2 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 6,406,604 B1. Claim 1, from which claim 2 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 2 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 2 of the instant application.

4. Claim 3 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,406,604 B1. Claim 1, from which claim 3 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 3 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 3 of the instant application.

5. Claim 4 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Patent No. 6,406,604 B1. Claim 1, from which claim 4 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 4 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 4 of the instant application.

Art Unit: 1753

6. Claim 5 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 5 of U.S. Patent No. 6,406,604 B1. Claim 4, from which claim 5 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 5 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 5 of the instant application.

7. Claim 6 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,406,604 B1. Claim 1, from which claim 6 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 6 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 6 of the instant application.

8. Claim 7 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 7 of U.S. Patent No. 6,406,604 B1. Claim 6, from which claim 7 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 7 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 7 of the instant application.

Art Unit: 1753

9. Claim 8 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 8 of U.S. Patent No. 6,406,604 B1. Claim 7, from which claim 8 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 8 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 8 of the instant application.

10. Claim 9 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9 of U.S. Patent No. 6,406,604 B1. Claim 8, from which claim 9 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 9 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 9 of the instant application.

11. Claim 10 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 10 of U.S. Patent No. 6,406,604 B1. Claim 1, from which claim 10 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 10 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 10 of the instant application.

Art Unit: 1753

12. Claim 11 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 11 of U.S. Patent No. 6,406,604 B1. Claim 1, from which claim 11 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 11 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 11 of the instant application.

13. Claim 12 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 12 of U.S. Patent No. 6,406,604 B1. Claim 11, from which claim 12 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 12 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 12 of the instant application.

14. Claim 13 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 13 of U.S. Patent No. 6,406,604 B1. Claim 1, from which claim 13 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 13 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 13 of the instant application.

Art Unit: 1753

15. Claim 14 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 14 of U.S. Patent No. 6,406,604 B1. Claim 13, from which claim 14 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 14 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 14 of the instant application.

16. Claim 15 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 15 of U.S. Patent No. US 6,406,604 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 15 of U.S. Patent No. US 6,406,604 B1 meets all the limitations required by claim 15 of the instant application.

17. Claim 16 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 16 of U.S. Patent No. 6,406,604 B1. Claim 15, from which claim 16 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 16 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 16 of the instant application.

Art Unit: 1753

18. Claim 17 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 17 of U.S. Patent No. 6,406,604 B1. Claim 15, from which claim 17 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 17 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 17 of the instant application.

19. Claim 18 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 18 of U.S. Patent No. 6,406,604 B1. Claim 15, from which claim 18 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 18 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 18 of the instant application.

20. Claim 19 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 19 of U.S. Patent No. 6,406,604 B1. Claim 18, from which claim 19 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 19 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 19 of the instant application.

Art Unit: 1753

21. Claim 20 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 20 of U.S. Patent No. 6,406,604 B1. Claim 15, from which claim 20 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 20 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 20 of the instant application.

22. Claim 21 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 21 of U.S. Patent No. 6,406,604 B1. Claim 20, from which claim 21 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 21 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 21 of the instant application.

23. Claim 22 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 22 of U.S. Patent No. 6,406,604 B1. Claim 21, from which claim 22 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 22 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 22 of the instant application.

Art Unit: 1753

24. Claim 23 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 23 of U.S. Patent No. 6,406,604 B1. Claim 22, from which claim 23 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 23 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 23 of the instant application.

25. Claim 24 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 24 of U.S. Patent No. 6,406,604 B1. Claim 15, from which claim 24 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 24 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 24 of the instant application.

26. Claim 25 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 25 of U.S. Patent No. 6,406,604 B1. Claim 15, from which claim 25 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 25 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 25 of the instant application.

Art Unit: 1753

27. Claim 26 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 26 of U.S. Patent No. 6,406,604 B1. Claim 25, from which claim 26 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 26 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 26 of the instant application.

28. Claim 27 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 27 of U.S. Patent No. 6,406,604 B1. Claim 15, from which claim 27 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 27 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 27 of the instant application.

29. Claim 28 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 28 of U.S. Patent No. 6,406,604 B1. Claim 27, from which claim 28 depends, has been addressed above. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 28 of U.S. Patent No. 6,406,604 B1 provides the same additional limitation as claim 28 of the instant application.

Claim Rejections - 35 USC § 102

30. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

31. Claims 1, 3, 11, and 12 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Petersson et al. ("Miniaturised on-line solid-phase extraction for enhancement of concentration sensitivity in capillary electrophoresis", Journal of Chromatography A, 841(2) (1999), 249-261). See the abstract and Figures 1(a) and 1(b).

32. Claims 1-7, 11, 15-21, and 25 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Foote (US 5,944,971). See the abstract; Figures 1 and 4(a)-(d); and col. 10, ll. 5-14 and col. 10, ll. 47-67. For claim 25 note that the Foote uses nucleic acids strands (filaments) as an affinity element.

Art Unit: 1753

33. Claims 1, 3, and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Gjerde et al. (WO 95/10344). See the abstract; pg. 14, second full paragraph; pg. 16, first full paragraph; pg. 22, "Example 7"; and claims 17, 19, and 25.

1. Claims 1, 15, and 24 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Swedberg et al. (US RE 36,350). See the abstract; Figures 1-5, 8A, 15, and 16A and 16B; and col. 25, ln. 59 - col. 29, ln. 67; especially col. 27, ln. 35 - col. 28, ln. 13 and col. 28, ll. 51-66.

Claim Rejections - 35 USC § 103

34. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1753

2. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersson et al. ("Miniaturised on-line solid-phase extraction for enhancement of concentration sensitivity in capillary electrophoresis", Journal of Chromatography A, 841(2) (1999), 249-261) in view of Naylor et al. (US 5,800,692).

Petersson et al. teach an electrophoresis apparatus comprising

- an inlet opening for introducing a sample to be analyzed;
- a transport capillary extending in a longitudinal direction;
- at least one separation capillary disposed at a preselected angle relative to the transport capillary;
- at least one analyte concentrator positioned adjacent to the transport capillary and the separation capillary;
- the analyte concentrator including a plurality of microstructures;
- the microstructures carrying at least one affinity element adapted to attract at least one analyte of interest from the sample which passes through the analyte concentrator; and
- a detector means for identifying and characterizing the analyte of interest.

See the abstract and Figures 1(a) and 1(b).

Petersson et al. do not mention using as an affinity element an analyte-specific antibody. Naylor et al. teach an electrophoresis device similar to that of Petersson et al. in that it has a transport capillary, analyte concentrator including a plurality of microstructures and a separation capillary. Naylor et al. also teach that the analyte concentrator should include an affinity element that has an affinity for the analyte, for example, an analyte-specific antibody. See the abstract; Figures 1-4; col. 9, ln. 37 - col. 10, ln. 3. It would have been obvious to one with ordinary skill

Art Unit: 1753

in the art at the time the invention was made to use an analyte-specific antibody as taught by Naylor et al. in the invention of Petersson et al. because then only the antigen (analyte) of interest will be retained and concentrated, which is the purpose of the analyte concentrator. More broadly, it would have been obvious to one with ordinary skill in the art at the time the invention was made to use an affinity element best suited for retaining the analyte to be enriched.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gjerde et al. (WO 95/10344) in view of Naylor et al. (US 5,800,692). Gjerde et al. teach an electrophoresis apparatus comprising

- an inlet opening for introducing a sample to be analyzed;

- a transport capillary extending in a longitudinal direction;

- at least one separation capillary disposed at a preselected angle relative to the transport capillary;

- at least one analyte concentrator positioned adjacent to the transport capillary and the separation capillary;

- the analyte concentrator including a plurality of microstructures;

- the microstructures carrying at least one affinity element adapted to attract at least one analyte of interest from the sample which passes through the analyte concentrator; and

- a detector means for identifying and characterizing the analyte of interest.

See the abstract and Figures 1(a) and 1(b).

Art Unit: 1753

Gjerde et al. do not mention using as an affinity element an analyte-specific antibody. Naylor et al. teach an electrophoresis device similar to that of Gjerde et al. in that it has a transport capillary, analyte concentrator including a plurality of microstructures and a separation capillary. Naylor et al. also teach that the analyte concentrator should include an affinity element that has an affinity for the analyte, for example, an analyte-specific antibody. See the abstract; Figures 1-4; col. 9, ln. 37 - col. 10, ln. 3. It would have been obvious to one with ordinary skill in the art at the time the invention was made to use an analyte-specific antibody as taught by Naylor et al. in the invention of Gjerde et al. because it then only the antigen (analyte) of interest will be retained and concentrated, which is the purpose of the analyte concentrator. More broadly, it would have been obvious to one with ordinary skill in the art at the time the invention was made to use an affinity element best suited for retaining the analyte to be enriched.

4. Claims 16 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swedberg et al. (US RE 36,350).

Addressing claim 16, Swedberg et al. teach an electrophoresis apparatus comprising
an inlet channel for introducing a sample to be analyzed;
a transport channel extending in a longitudinal direction;
at least one separation channel disposed at a pre-selected angle relative to the transport channel;
the transport channel and the separation channel being formed in a microchip;

Art Unit: 1753

an analyte concentrator positioned adjacent to the transport channel and the separation channel;

the analyte concentrator including a plurality of microstructures;

the microstructures carrying at least one affinity element adapted to attract at least one analyte from the sample which passes through the analyte concentrator; and

a detector means for identifying and characterizing the analyte of interest. See the abstract; Figures 1-5, 8A, 15, and 16A and 16B; and col. 25, ln. 59 - col. 29, ln. 67; especially col. 27, ln. 35 - col. 28, ln. 13 and col. 28, ll. 51-66. Swedborg et al. do not mention an embodiment in which the separation channel is perpendicular to the transport channel; however, a perpendicular arrangement of elements is clearly within the scope of Swedborg et al. (Figures 15, 16A, and 16B). Barring evidence to the contrary, such as unexpected results, having the transport channel and separation channel perpendicular is a design choice resulting from the allocated size for the substrate and the sizes and numbers of the various analysis, processing, and detection chambers that must be included. It is just a matter of fitting all of the desired elements into the substrate.

Addressing claim 28, Swedborg et al. teach an electrophoresis apparatus comprising

an inlet channel for introducing a sample to be analyzed;

a transport channel extending in a longitudinal direction;

at least one separation channel disposed at a pre-selected angle relative to the transport channel;

the transport channel and the separation channel being formed in a microchip;

Art Unit: 1753

an analyte concentrator positioned adjacent to the transport channel and the separation channel;

the analyte concentrator including a plurality of microstructures;

the microstructures carrying at least one affinity element adapted to attract at least one analyte from the sample which passes through the analyte concentrator; and

a detector means for identifying and characterizing the analyte of interest. See the abstract; Figures 1-5, 8A, 15, and 16A and 16B; and col. 25, ln. 59 - col. 29, ln. 67; especially col. 27, ln. 35 - col. 28, ln. 13 and col. 28, ll. 51-66. Swedborg et al. do not mention an embodiment having at least two analyte concentrators; however, barring evidence to the contrary, such as unexpected results this would essentially be duplicating parts. It would have been obvious to one with ordinary skill in the art at the time of the invention to provide more than one analyte concentrators if more than one analytes were of interest.

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swedberg et al. (US RE 36,350) in view of Naylor et al. (US 5,800,692). Swedberg et al. teach an electrophoresis apparatus comprising

an inlet channel for introducing a sample to be analyzed;

a transport channel extending in a longitudinal direction;

at least one separation channel disposed at a pre-selected angle relative to the transport channel;

the transport channel and the separation channel being formed in a microchip;

Art Unit: 1753

an analyte concentrator positioned adjacent to the transport channel and the separation channel;

the analyte concentrator including a plurality of microstructures;

the microstructures carrying at least one affinity element adapted to attract at least one analyte from the sample which passes through the analyte concentrator; and

a detector means for identifying and characterizing the analyte of interest. See the abstract; Figures 1-5, 8A, 15, and 16A and 16B; and col. 25, ln. 59 - col. 29, ln. 67; especially col. 27, ln. 35 - col. 28, ln. 13 and col. 28, ll. 51-66. Swedborg et al. do not mention porous end walls defining the analyte concentrator. Naylor teaches porous end walls defining an analyte concentrator in a channel system. See the abstract; Figures 1-4; col. 9, ln. 37 - col. 10, ln. 3. See also especially elements 9 in Figures 1 and 4 and col. 14, ll. 17-47. It would have been obvious to one with ordinary skill in the art at the time the invention was made to use porous end walls as taught by Naylor in the invention of Swedborg because as taught by Naylor they "confine the motion of the sample processing material". See col. 14, ll. 21-24.

Claim Objections

36. Claim 11 is objected to because of the following informality: in line 4 "or" should be -- , and --. Appropriate correction is required. MPEP 2173.05(h).

Art Unit: 1753

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX NOGUEROLA whose telephone number is (571) 272-1343. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NAM NGUYEN can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alex Noguerola
Primary Examiner
AU 1753
March 1, 2005